

Shell  
Answer #4  
Book

# THE CAR BUYING & SELLING BOOK

11 things you should know when you  
buy, sell or trade a car



By John P. Finsland, Shell Consumer Relations

**Come to**  
  
**Shell for answers**

Keep this book. It could help save you time and money when you buy, sell or trade a car.

**I**s the automotive market really the last bastion of "horse trading" in this country? You'll find out when you buy or sell your next car.

Since getting the assignment to write this book, I've offered one car for trade seven different times. I've gotten seven different prices on the same kind of new car. And I've convinced myself that knowing what you're doing in advance can save you money and a lot of aggravation. Maybe some of what I learned can help you.

### Q. When's the best time to trade in a car?

**A.** There probably is no "best" time. It depends on your own situation. Consider the following: (1) Does your car run well? (2) Do you still enjoy driving it? (3) Can you afford a new car? Another point to ponder is operational costs. If big maintenance costs have become a regular expense, you may be better off trading.

If you're like most drivers, you'll probably find an increase in operational costs around the fourth year.

### Average Operational Costs of Standard and Subcompact Cars

|   | GAS & OIL<br>(including state and federal taxes) | REPAIRS, MAINTENANCE, PARTS<br>(including federal tax on tires) | TIRES & ACCESSORIES | INSURANCE | REGISTRATION FEE | GARAGING,<br>PARKING, TOLLS | DEPRECIATION | TOTAL COSTS<br>for the year | TOTAL COSTS<br>per mile |
|---|--|---|---------------------|-----------|------------------|-----------------------------|--------------|-----------------------------|-------------------------|
| <b>FIRST YEAR</b> (cars driven 14,500 miles)  |  |   |                     |           |                  |                             |              |                             |                         |
| standard-size car                             | \$645.39   | \$135.50  | \$24.60             | \$272.86  | \$278.20         | \$2,100.00                  | \$3,456.55   | 23.8¢                       |                         |
| subcompact-size car                           | \$390.96   | \$107.65  | \$18.82             | \$235.59  | \$267.32         | \$1,120.00                  | \$2,140.34   | 14.8¢                       |                         |
| <b>SECOND YEAR</b> (cars driven 13,000 miles) |  |   |                     |           |                  |                             |              |                             |                         |
| standard-size car                             | \$579.83   | \$174.13  | \$22.30             | \$255.55  | \$267.76         | \$1,020.00                  | \$2,319.57   | 17.8¢                       |                         |
| subcompact-size car                           | \$350.97   | \$165.91  | \$17.11             | \$224.94  | \$256.88         | \$544.00                    | \$1,559.81   | 12.0¢                       |                         |
| <b>THIRD YEAR</b> (cars driven 11,500 miles)  |  |   |                     |           |                  |                             |              |                             |                         |
| standard-size car                             | \$516.42   | \$367.43  | \$35.94             | \$255.55  | \$257.28         | \$780.00                    | \$2,212.62   | 19.2¢                       |                         |
| subcompact-size car                           | \$313.69   | \$145.02  | \$20.83             | \$224.94  | \$246.36         | \$416.00                    | \$1,366.84   | 11.9¢                       |                         |
| <b>FOURTH YEAR</b> (cars driven 10,000 miles) |  |   |                     |           |                  |                             |              |                             |                         |
| standard-size car                             | \$450.84   | \$487.48  | \$50.51             | \$235.59  | \$246.79         | \$660.00                    | \$2,131.21   | 21.3¢                       |                         |
| subcompact-size car                           | \$273.69   | \$387.50  | \$37.45             | \$210.30  | \$235.87         | \$352.00                    | \$1,496.81   | 15.0¢                       |                         |

*Driver's Handbook* by Robert C. Smith with Min S. Yee and Donald K. Wright. Copyright © 1975 by Donald K. Wright and Min S. Yee. Published by Bantam Books, Inc. All rights reserved. Information updated as of June, 1976.

But after that, they start to decline. Your own situation should dictate your decision. The chart on the previous page shows operational costs. It's based on average driving estimates and may be of help to you.



*More time  
more money*



*Less time  
less money*

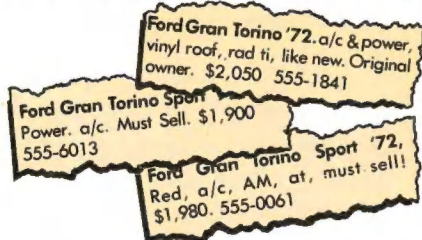
## Q. Is it better to sell my own car or just trade it in?

**A.** You generally get more when you sell the car yourself.

A trade-in will normally bring less money for your car, but if you don't want to take the time and occasional hassles that go with selling your own car, trading will probably move your car quicker.

## Q. How do I know what the "asking price" of my car should be?

**A.** Look in the classified section of your local newspaper to see what a car like yours is priced at. That may



give you some idea of the going "retail" price. You should also check

## Know the price difference

Dealer A has offered you \$1500 for your car as a trade-in on a \$5500 car.

Dealer B has offered you only \$1300 for your car. But he's agreed to sell you a car for \$5100.

Assuming the new cars are exactly alike, and price is your only consideration, which is the better deal?

It might be obvious to you that Dealer B is offering a better deal. But new car dealers tell me that some people jump at the highest trade-in offer they get, never realizing that that particular offer might be costing them money rather than saving them money.

the National Automobile Dealers Association Official Used Car Guide or The Kelley Blue Book. They list average "retail" and "wholesale" prices, and can be found at banks, credit unions, insurance agencies, or auto dealerships. Remember, if you're trading, the dealer will usually offer you something around the "wholesale" price.

## Q. Is it true that one dealer will offer more than another for the same car?

**A.** In my test the answer was yes. Most car dealers are independent businessmen. Some can sell one kind of car more quickly than another. If your car happens to be the type a

### About the author

John P. Finstrand is a member of Shell's Consumer Relations Department. One of his most important jobs is sending consumers useful information that can help them make more intelligent buying decisions. For over twenty-five years he's been closely associated with the teaching of proper automobile maintenance.

dealer knows he can move in a hurry, he may offer you a better price. But don't be confused by trade-in offers. Remember it's the *price difference* between the trade-in and the new car that really matters.

**Q. When a dealer eyeballs my car, what's he looking for?**

**A.** A dealer buys cars to sell, not to drive. So when he looks at your car, he's concerned about how easy or hard it will be for him to sell it. Most dealers will classify the cars they look at in one of these categories:

**Clean** — Car is neat and attractive. With acceptable signs of wear.

**Average** — Signs of wear and neglect are clearly visible although some effort has been made to keep the car in shape.

**Rough** — Awful condition. Will be tough to sell. (Even though it may run well.)

Some dealers use appraisal forms. On the form they'll list all the things they'll have to do to get your car ready to sell. Then they'll deduct those "detailing" costs from the wholesale price of your car before arriving at a trade-in price.



*With approximately 10 million private car sales every year, your car needs to look its best. Any small noise or defect that might create uncertainty in a buyer's mind might be worth fixing.*

**You can help your car live to a ripe old age with Shell motor oils**

Can your car last 100,000 miles? Or more? It stands a lot better chance if you regularly perform appropriate maintenance and use a top-quality motor oil that will help protect your engine.



**Shell Super X®** 10W-50 motor oil is Shell's best. It has the widest multi-grade range you can buy. If you do a lot of stop-and-go driving or trailer towing, Shell Super X can provide the kind of protection you need.

**Shell X-100®** Multigrade 10W-40 is an all-season motor oil. It's specially designed to provide high-temperature protection and low-temperature startability.

**Shell X-100®** is a single grade motor oil. Available in 10W, 20W-20, 30 and 40 grades.

These top-quality Shell motor oils are designed for passenger cars and meet or exceed all U.S. car makers' tough warranty service requirements.

**Q. If I'm selling my car to an individual, what can I do to make it more appealing?**

**A.** A little wash and wax never hurts. A prospective buyer's first impression of your car is very important. You might even clean the engine.

Clean the carpets and the upholstery. It doesn't cost very much and it can make the buyer a lot more comfortable about offering you a good price for your car.

**Q. What are some of the things I should know about selling my own car?**

**A.** "For Sale" signs. Use them only if they're legal in your area. And be sure to include a telephone number.

After a week or so if you haven't had any response, put a small ad in the classified section of your local newspaper. List the important features of the car but be brief. Advertising space costs money.

You might also seek professional advice about the laws in your area regarding odometer verification, title requirements, or any other special needs. Look before you leap.



*Your ability to negotiate could make a big difference in the price of your new car.*

**Be prepared to bargain**

First, I took my four-year-old, unwashed, untidy car to four new car dealers to establish an average trade-in offer. After that, I had the car professionally cleaned. Exterior, interior, even the engine. I spent one-half day and \$45 getting the car to look great. Then I took it to three more dealers. This time the average trade-in offer was only a few dollars higher. Just barely enough to cover the cost of the cleanup.

So while a bit of spit and polish may impress individual buyers, don't

expect it to influence car dealers. If you know what your car is worth, and dealers aren't offering it to you, consider selling the car to an individual.

Don't be afraid to try to negotiate the price of the new car. All dealers are different. Some are willing to make deals that others aren't.

Do your homework in advance. Don't necessarily settle for the first offer you get. And above all, be prepared to bargain.

*This was how my test turned out. You may or may not get similar results. A lot depends on the kind of car you're trading, its mileage, the market situation at the time, and your ability to negotiate.*

## Q. Is that cream puff really a stale roll?

**A.** Here's some things to look for when buying a used car:

### 1. Engine

(a) Hard to start (b) Rough or noisy

### Do you know used car shorthand?

If you can't understand this ad, you'll need this list.

72 Chevy conv, 8 cyl, pd, a/c  
AM/FM stereo, ps, lo mi  
\$2950 P.O. Box 123

**Translation:** 1972 Chevrolet convertible, eight cylinders, power disc brakes, air conditioning, AM/FM stereo, power steering, low mileage.

a/c — air conditioning

at — automatic transmission

cb — citizens band radio

conv — convertible

cpe — coupe

cyl — cylinders (4, 6, 8)

dlr — dealer

dr — doors (2, 4)

hdtp — hardtop

lo mi — low mileage

pb — power brakes

pd — power disc brakes

ps — power steering

p seats — power seats

pw — power windows

rad ti — radial tires

sed — sedan

spd cntrl — speed control

tape — tape player

std tr — standard transmission

vinyl — vinyl top

wrnty — warranty

wgn — station wagon

This list is not all inclusive but it does cover most of the items you'd want to point out.

idle (c) Slow engine response when you step on the gas.

### 2. Interior

(a) Excessive steering-wheel play is unsafe and could mean major steering problems (b) Inoperative heater/defroster/air-conditioner (c) No spare tire, jack or lug wrench (d) Rugs and floor mats can cover up rusted-out parts of the floor.

### 3. Exterior

(a) New paint could be covering collision marks (b) Ripples in body metal are almost a sure sign of previous wreck (c) New or refinished chrome could mean there's been rust or a wreck (d) Have the tires been painted to make them look better? Glossy finish and cracks in the sidewalls may mean they have. (e) Patches and repair tape can be hiding rusted-out tail pipes or mufflers (f) Unevenly worn tires could mean front-end problem.

And make sure the car has a current safety inspection sticker if required.



*This tire is unsafe. It indicates a front-end alignment is needed.*

## Q. What's a good way to test-drive a used car?

**A.** There are a lot of good ways. Here's one I like. When you can, follow this procedure. Just a little bit of driving

can tell you a lot about the car.

**1. While the car's parked** — Put the car in neutral, increase the engine speed and check the exhaust. *Black* smoke means a carburetion problem. *Blue* smoke could mean a worn engine. *White* "smoke," when starting a cold engine, is probably just water vapor.

**2. Starting out** — Before you take off, shift back and forth from reverse to drive (low gear for manual transmissions). Be alert for unusual noises, or slippage. Then drive the car on the highway and check for them again during gear changes. They could mean transmission trouble.

**3. Stopping** — Accelerate smoothly to about 30 mph. Then slow down by pressing the brake pedal. If the pedal continues to go down it could mean a leak in the brake system.

**4. Empty parking lot** — Drive slowly and move the steering-wheel back and forth. Slow steering response could mean worn steering linkage. Then accelerate to 25 mph and let the car steer itself. Veering could mean improper wheel alignment or other front-end problems.

**5. Bumpy Road** — Drive over an uneven road. Severe swaying or bouncing might indicate bad shocks. (Listen for excessive rattles and noise.)

**6. Parked** — Park, but leave the engine idling. After a bit, move the car and check for leaks underneath. (Water drips from the air-conditioner are normal.) Check for leaks around the engine too.

If you're buying from a dealer,

expect him to go with you on the test ride. (It's usually required by his insurance agency.) And ask about a warranty.

If you're not prepared to do these checks yourself, it may be worth having a qualified mechanic do them for you.

### **Q. How do I know if I'm really getting a good deal on a new car?**

**A.** The best way to know is to do what I did, *shop around*. But there



*I found how much a dealer will deal depends on the type of car, the market and the dealer's own costs.*

are right and wrong ways to go about it. Here's a procedure that might help you. (1) Decide what style of car you want in advance. Then look for *only* that kind of car with options you want. (2) Settle on the price of the new car *before* you talk trade-in. In many cases you can get the dealer to come down from the "sticker price" or "manufacturer's suggested retail price." (Some exceptions may be special cars or foreign cars.)

Don't be afraid to drive a hard bargain. It's a competitive market and car dealers are anxious to sell their cars. (3) After you've got a firm figure, then discuss your trade-in. Keep in mind that if the dealer came

down quite a bit from the sticker price, he may offer you less for your old car. But as we pointed out before, it's the *price difference*, the net price that you pay, that's the really important figure.

In my test I visited seven different dealers and got seven different prices. The price differences varied as much as \$500. So as you can see, it does pay to shop around. Remember that location and convenience of your dealer can be factors that may override small price differences.

### **Q. How do I know which new car is the right car for me?**

**A.** The car that's right for you is one that best meets these three criteria: (1) It's a car you really like (2) It's a car that's right for your family and the type of driving you plan to do. (If you need more room, maybe you

need a bigger car. But smaller cars are usually more economical.) (3) It's a car you can afford. Keep these things foremost in your mind. And if you're concerned about how different cars stack up against each other, you can always check the various automotive magazines.

### **Q. Any questions?**

**A.** While I'm certainly not an expert, I did spend a lot of time digging into the buying and selling of cars. I hope what I've learned can help you.

If you have questions about any of the information contained in this book, write to me, John P. Finsland, Shell Oil Company, P.O. Box 61609, Houston, Texas 77208. Watch for the Shell Answer Books on other subjects in leading magazines and at your participating Shell Dealer.

### **If you're looking at a '75 or '76 model, some noises could mean trouble with the gasoline, not with the engine.**

If you hear a pinging or rattling noise when the car accelerates, or if the engine runs on when you turn the key off, it could be that the octane rating of your gasoline simply isn't high enough. If it's a car that requires unleaded fuel, all it



may need is a tankful of Shell Super Regular Unleaded. It has a 94 or 95 Research octane number (instead of about 92 for the average unleaded). Super Regular's higher octane rating could eliminate engine knock and run-on in many cars.

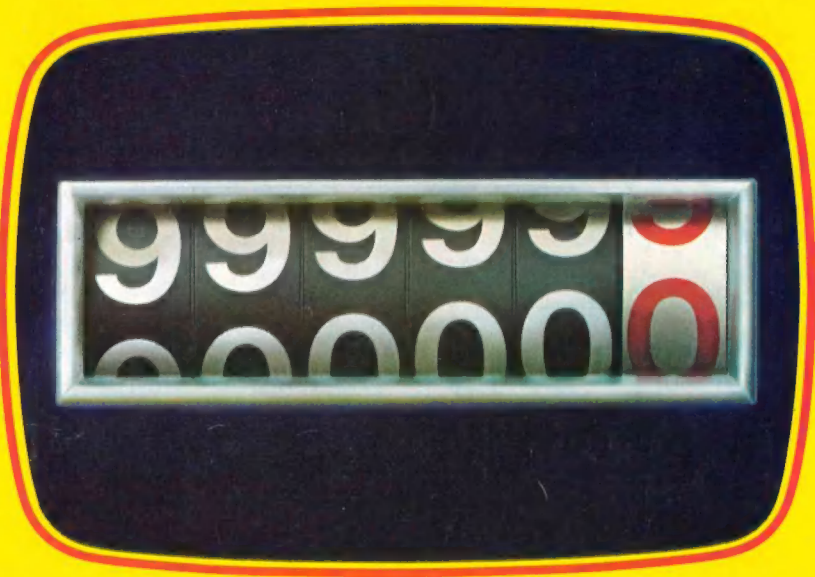
(Super Regular Unleaded is available at most Shell stations)

**Come to**  
  
**Shell for answers**

Shell  
Answer # **5**  
Book

# THE 100,000 MILE BOOK

How to help your car do it,  
but not show it.



by Norman Goldbeck, Shell Dealer, St. Louis, Missouri



**Come to  
Shell for answers**

Six veteran mechanics compared notes on how to make cars last. The key points are in this book.

**A**nybody can keep a car going for 100,000 miles. Just keep fixing everything that goes wrong.

But that's risky.

It's smarter to try to keep things from going wrong in the first place. If you do that, you have a chance of going 100,000 miles in a comfortable, reliable car. One that you're still proud of.

In preparing this book, Shell brought me and five other experienced dealers together to discuss what we had learned about "100,000-mile cars." The things we talked about might stretch your car's life.

**Q. What's the secret of keeping a car in shape that long?**

**A.** With combined experience of 155 years in the car service business, our group summed it up this way: Do it by the book. The owner's manual.



*An owner's manual that never leaves the glove compartment can lead a car to an early grave.*

Good maintenance is the key to 100,000 successful miles, and the owner's manual that comes with the car tells you what maintenance to do and when to do it.

A lot of people ignore the owner's manual. Shell asked more than a hundred drivers, and found that *half* of them had not even read their owner's manuals all the way through.



*The results of careful maintenance: me and the other five Shell Dealers, each with a customer whose car went beyond 100,000*

*miles without any extraordinary care or major repairs.*

*The cars are (l to r): a '73 Ford LTD*

And about one in ten had never read it at all. That can be awfully tough on a car.

Some people read it, but then follow only part of it. They wouldn't dare miss an oil change, but they'll go for years without even checking the transmission fluid. *Every item in the owner's manual is there for a reason.*

If more people did it by the book, I think cars that ran well for 100,000 miles might be the rule, not the exception.

### **Q. Which are the most important maintenance jobs?**

**A.** Everything in the book is important, but these ten stand out:

1. Check all fluid levels — in radiator, crankcase, transmission, brakes, power steering, and battery.
2. Change oil and filter.
3. Check drive belts.
4. Check water hoses.
5. Check battery charge.
6. Flush and refill radiator.
7. Lubricate.
8. Check brake linings.

9. Inspect tires and check pressure.
10. Change automatic transmission fluid.

### **Q. Should I do the same maintenance no matter how I drive?**

**A.** No. For example, owner's manuals recommend more frequent changing of motor oil and transmission fluid for "severe service." And that doesn't just mean driving in Baja torture tests. Stop-and-go driving in cold weather is one of the toughest ways to put miles on a car. It's usually included in "severe."

Your owner's manual probably

#### **About the author**



*Norman Goldbeck has operated a Shell station in the St. Louis area for 22 years. He has completed Shell's training course in the use of advanced diagnostic equipment and is licensed as an Inspector-Mechanic by the state of Missouri.*



*wagon, 118,000 miles; a '70 Oldsmobile Cutlass, 106,000 miles; a '68 Rambler Ambassador wagon, 102,000 miles; a '68*

*Pontiac Executive wagon, 105,000 miles; a '66 Dodge Polara, 101,000 miles; and a '68 Ford XL, 108,000 miles.*

## Car Saver: How to choose the right motor oil (even if it isn't Shell).

At 55 mph, each piston in your engine moves up and down inside its cylinder about 35 times a second. Piston temperatures can reach 400 degrees Fahrenheit. Bearing pressures exceed 1,000 pounds per square inch.

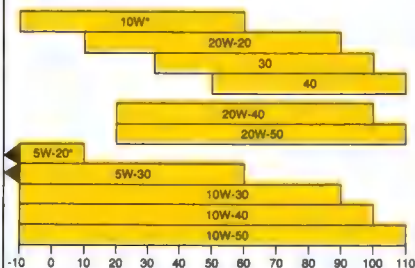
The only thing that keeps the engine from grinding itself to pieces is a film of motor oil thinner than this page.

Two things on the can lid (below) tell if an oil is okay for your car.

*SAE Viscosity Grade. Tells how thick the oil is. The higher the number, the thicker the oil. Chart at bottom tells which grades Shell recommends for your climate.*



*API Service Classification. Oil that has "SE" on the can meets requirements for all American and most foreign cars.*



Consistent Outside Temperature, °F

\* Not recommended for sustained high-speed driving.

recommends service at a certain mileage or time, whichever comes first. If you don't run up a lot of miles, service your car by the time interval. It's just as important as the mileage interval.

## Q. Isn't the owner's manual just trying to sell service I don't need?

**A.** No. Those things really are good for your car. Even the little things.

Here's an example that might convince you.

At my station, we work on fleet vehicles from a big St. Louis company. The company gives us a checklist of maintenance they want done.

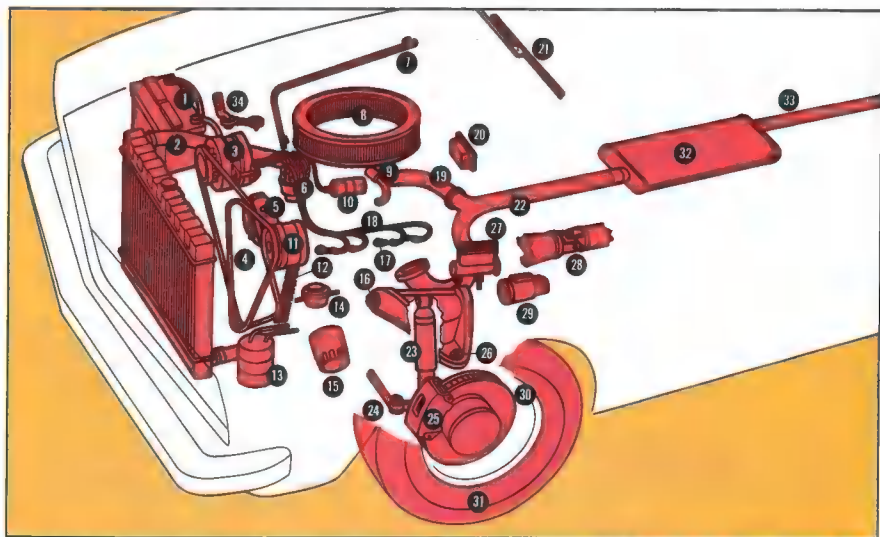
It's as long as your arm. Even more detailed than most owner's manuals.

The point is this: They wouldn't pay someone to do all that work unless they expected to save money and have a more reliable vehicle because of it.

The same is true for your car. It's hard to find a maintenance job in an owner's manual that won't be



*Checking the gas tank mountings might seem like an awfully small detail. But that's how far one of my commercial customers goes on their checklist. They know the value of good maintenance.*



*It's likely that most of these components will need to be replaced before 100,000 miles. The big-money items—engine, transmission, rear end—should make it all the way. 1. Battery and cables 2. Radiator hoses 3. Alternator 4. Belts 5. Water pump 6. Distributor cap, points, condenser, and rotor 7. Heater hoses 8. Air filter 9. PCV valve 10. Coil 11. Air pump 12. Timing gear chain 13. Fuel vapor canister filter 14. Fuel pump 15. Oil filter 16. Control arm bushings 17. Spark plugs 18. Spark plug wires 19. Exhaust pipe 20. Voltage regulator 21. Windshield wiper blades 22. Crossover pipe 23. Shocks 24. Tie rod ends 25. Pads, disc kits, linings, and wheel cylinder kits 26. Ball joints 27. Master cylinder 28. U-joints 29. Starter 30. Discs 31. Tires 32. Muffler 33. Tail pipe 34. Steering idler arm.\**

worth it in the long run. Especially now that inflation is making people hang on to their cars longer.

### **Q. What will I have to replace before 100,000?**

**A.** No one can say for sure. But the drawing above shows things we would expect to go out before 100,000 miles. Notice that the big-money items like the engine, transmission, and differential will probably go the whole distance.

Replacing everything in the drawing might have cost \$2,200 for a typical car\*, labor included. Assuming it takes seven years to reach

100,000 miles, that works out to \$26.20 per month, slightly more than 2¢ per mile.

This example includes normal maintenance and wear items like oil filters and tires.

### **Q. How can I remember when my car needs what?**

**A.** You can't just keep it in your head. Especially if you have more than one car in the family.

Our group agreed that to take

\*This is a hypothetical example. Shell experts compiled the list of parts that would probably need to be replaced on a 1970 Chevrolet with a 350-cu.-in. engine, power steering, power disc brakes, automatic transmission, and air conditioning. The cost of replacement is based on the 1974 *Motor's Parts and Time Guide*.

first-class care of a car, you have to do what fleet owners do — keep a written record of all maintenance so you know when to do it again.

Some places will keep a record for you. Or you can do it yourself.

You can get a free Maintenance Record File from Shell. It's a chart for recording the date and mileage when a particular job is done. Inside is a pocket for keeping receipts and warranties. Write to "100,000 miles," Shell Oil Company, P.O. Box 61609, Houston, Texas 77208.



*A Maintenance Record File for your car. (Write Shell for a free one.) With it, you can keep a written record of maintenance. Fleet managers do.*

### **Q. Does climate make a difference in maintenance?**

**A.** Absolutely. For example, rust is a big problem in northern cities where road de-icing salt is used. Wash your car frequently and hose off the underside of chassis and wheel wells.

You might also invest in rust-proofing by one of the companies that specializes in it. They spray a coating into body parts to fight rusting from the inside.

If you live in an area where the summers are real scorchers, pay

special attention to the cooling system. One bad overheating can plant the seeds of problems that will stop you short of 100,000 miles. (See cooling system checkout on the opposite page.)

### **Q. What's the maintenance job people forget the most?**

**A.** Our group voted a tie for Most Overlooked Maintenance Job. Forgetting to drain and flush the cooling system ran neck and neck with forgetting to change the transmission fluid and filter. Neither of them is very expensive or time-consuming. Either of them can lead to a major repair bill if ignored.

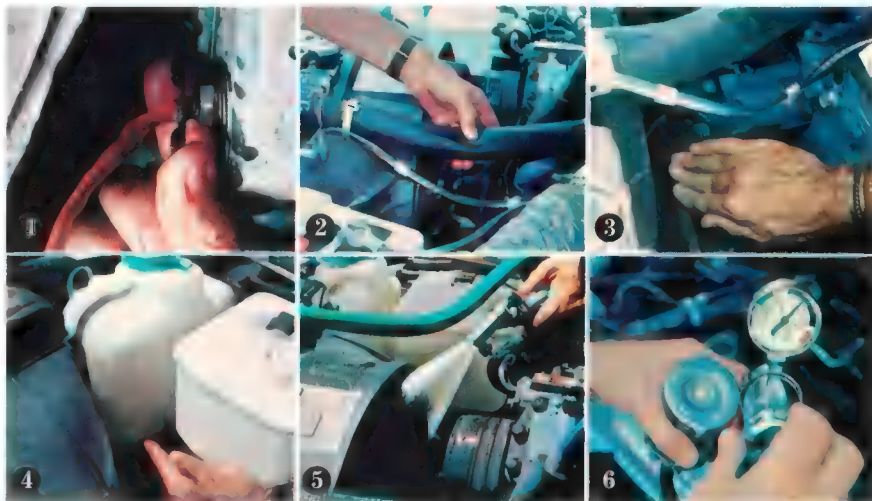
### **Check the Shell line for the right motor oil for your car.**



Shell X-100® single grades are available in SAE 10W, 20W-20, 30 and 40. Each meets the warranty service requirements of every U.S. car and most foreign cars.

Shell X-100 Multigrade is an SAE 10W-40 all-season oil offering excellent high-temperature protection plus good low-temperature startability. Meets or exceeds warranty requirements.

Shell Super X® earns the 10W-50 rating, the widest multigrade range you can buy. Helps protect today's hotter running engines. Exceeds warranty requirements.



### Car Saver: Six steps to avoid overheating.

At 55 mph, your cooling system handles enough heat to warm a seven-room house in zero-degree weather. This six-step service plan will keep your cooling system in shape for that big job.

**1. Drain and flush** the entire system as specified in your owner's manual to fight rust and corrosion. Most service stations have the equipment to give your cooling system a "reverse flush," the most effective kind.

**2. Check hoses** for cracks, leaks, and swelling. Make sure clamps are tight. Change hoses at least every two years. This step goes for heater hoses, too.

**3. Check belts.** Check tension by pressing down on the middle of each belt. It shouldn't give more than about half an inch. Check for wear and cracks.

**4. Check coolant level.** If it's low, add a 50-50 mixture of water and glycol antifreeze. Adding water alone

will dilute the mixture. **Warning:** Never remove the radiator cap unless the engine is cold.

**5. Clean radiator** by spraying with a hose from the engine side. The junk that gets caught in it can reduce air flow and cooling efficiency.

**6. Check pressure cap** with pressure tester.

### Shellzone® antifreeze/coolant fights internal engine rust.



Shellzone has an ethylene glycol base and additives to fight rust and corrosion that can form on interior engine surfaces and lower the efficiency of your cooling system. It is compatible with all cooling systems including those with aluminum parts.

Don't risk engine damage. Have your Shell Dealer check your coolant soon. And when it's time to replace or replenish, fill up with Shellzone for year-round protection.

**Q. How will my car run when it has 100,000 miles on it?**

**A.** It might run very well indeed.

Three years ago, Shell tested the performance of 25 cars that had 100,000 miles or more.

On the average they still had 98.7 percent of their estimated original road horsepower.

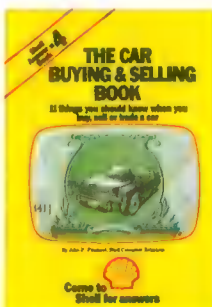
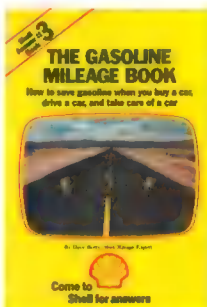
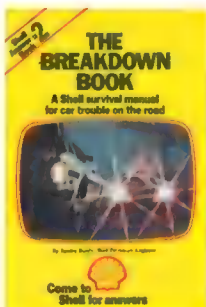
Oil consumption at 70 mph averaged only one quart per 1,600 miles.

Your car might do better, it might not do as well. But these averages show that a car doesn't *have* to be a clunker when it breaks 100,000.

**Q. Any questions?**

**A.** Write us.

If you have any other questions about how to help your car last a long time, write: "100,000 miles," Shell Oil Company, P. O. Box 61609, Houston, Texas 77208.



**How to get more answers from Shell.** Other books in the Shell Answer Series are available at many Shell Dealers. Or you can write Shell Answer Books, P. O. Box 61609, Houston, Texas 77208. Books on new subjects will be out soon.

**Come to**  
  
**Shell for answers**

Shell  
Answer # **6**  
Book

# THE RUSH HOUR BOOK

**How America cuts the cost  
and headache of driving to work**



By Stan Stocks, Shell Transportation Administrator



**Come to  
Shell for answers**

Want to spend less on your ride to work? Share the ride and the cost with somebody else. This book can help you decide if ridesharing is for you.

**E**very working day, around 20 million Americans carpool to work. If you don't, and think that carpooling doesn't really affect you, you're wrong. Carpooling, like other forms of ridesharing, affects everyone who uses our streets and highways. And it's going to affect you more and more as the cost of commuting gets higher, freeways become more crowded, and energy gets more expensive.

I did a lot of digging, a lot of listening, and a lot of traveling to find out what ridesharing really has to offer. You may not be able to share a ride.

But if you are able, and just haven't made a decision yet, what I learned may give you some pretty persuasive reasons for cashing in on ridesharing.

**Q. Just how much money can I save by carpooling?**

**A.** The U.S. Dept. of Transportation's Federal Highway Administration estimates a driver can save between \$281 and \$654 a year on a 20-mile daily round trip if he carpools. To get a rough idea of what *you* might be able to save, try this formula:

Estimate the amount of money



*Ridesharing saves. If average automobile occupancy were increased from its present 1.6 persons per car to two persons per car, almost 5 billion gallons of gasoline would be saved each year. And 15 million cars would be removed from rush hour traffic.*



Wendell Anderson, former governor of Minnesota, told me that 51 percent of all St. Paul state employees carpool. The state legislature set a goal of increasing ride-sharing among all metropolitan workers from 37 percent to 50 percent by 1980.

you're spending on gasoline for your daily trip to and from work. Then add what you're spending for parking. (Plus tolls if any.) Then multiply this by 21. (The average number of days most people work each month.) That'll tell you about how much you spend each month. Divide that total by

### About the author.

Stan Stocks is a graduate of the University of Southern California. He has been with Shell ten years. For the past three years Stan has coordinated Shell's Carpool Matching Program. Working with community and government officials is nothing new for him. In 1970 he was "on loan" from Shell to serve as Director of the Vocational Guidance Institute's National Alliance of Businessmen in Washington, D.C.



the number of people who'll be in your carpool. The answer is your new, lower cost of commuting.

### Q. Are there any other advantages to carpooling aside from saving money?

A. Yes. First of all, you don't have the hassle of driving to work each day. Those freeway marathons are a lot



Driving alone versus a full car. Figure the dollar difference it could make to you.

### Use this example to help compute your savings

Say you spend a couple of bucks a day on gas. Another two dollars for parking. That multiplies into a hefty sum every month.

$\$4 \text{ per day} \times 21 \text{ days} = \$84$

|   | Individ. cost<br>per month | Savings<br>per month |
|---|----------------------------|----------------------|
| Carpooling with one can cut the cost in half.   | \$42                       | \$42                 |
| Another person drops it even more.              | \$28                       | \$56                 |
| If still another joins, your cost is even less. | \$21                       | \$63                 |

In this example carpooling saves up to \$63 a month. How much could it save you?

While some purists may complain that this example doesn't include such factors as depreciation, insurance, service, maintenance and other costs, I think most will agree that it does cover the basic costs of commuting.



*Houston Mayor Fred Hofheinz and I discussed the city's CarShare program. This city-sponsored computer match-up system has proven to be the most successful of its kind in the nation. Over a one-year period, the program has cut commuter driving in and around Houston by 18 million miles.*

easier to take when you can sit back, enjoy the paper or catch up on some sleep on the way to work. There's also a good chance you'll get to work on time a lot more often. And besides cutting commuting costs, carpooling could eliminate the need for an additional car in some families.

**Q. Is it hard to start or join a carpool?**

**A.** Most of the time it's relatively easy. Especially if you work for a large company or live in a city.

At Shell's downtown Houston offices, almost 70 percent of my 4800 co-workers carpool. The majority of them joined a carpool at work. Some simply got together with their neighbors on their own.

Check your place of business. There may already be a carpool system in effect. If you live in a city, find out if there's a computer matching

system or a local American Automobile Association that can put you in touch with people going your way.

Put up notes in local lunchrooms, libraries, supermarkets — wherever personal notices can be posted. If none of these approaches pan out, write "Double Up," U.S. Department of Transportation (HHP-26), Washington, D.C. 20590. They, like the Highway Users Federation, can give you information about how your community or employer can organize a carpooling program.

**Q. Why don't companies make it easier for their employees to carpool?**

**A.** A lot do. In fact, many have come up with innovative ways to encourage carpooling.

In St. Paul, Minnesota, the 3M Company began a pilot Commute-a-Van program in which employees paid to use six company-owned 12-



*Mayor Tom Bradley of Los Angeles told me about a new vanpooling program for municipal employees, and carpooling incentives including free parking in the convenient City Hall garage.*



*Leon Bush, Director of Transportation, told me that employees pay \$41.00 monthly for a 40-mile round trip in one of Aerospace Corporation's 10-passenger vans. The driver, also an employee, receives the equivalent of one monthly fare for his services. Vans are leased by Aerospace and the employees' monthly fees make the program totally self-supporting.*

passenger vans. A year later they had 67 vans with over 1,000 employees on waiting lists. Vanpooling increased interest in carpooling too. Now more than 40 percent of all 3M employees share a ride.

The Aerospace Corporation of Los Angeles followed 3M's lead and devised a self-supporting 18-van program. That's in addition to five 40-passenger buses and carpooling, too.

Other companies like Texas Instruments, Jantzen Inc., IBM, and Hallmark Cards have extensive ridesharing programs. Employers have used some rather inventive incentives to motivate ridesharing.

In Phoenix, AiResearch Manufacturing Company of Arizona, a division of the Garrett Corporation, used

### **Ridesharing makes good corporate sense too**

On top of environmental and economic advantages, there are other corporate advantages to carpooling.

[1] Employees get to work on time more often.

[2] It reduces the need for new parking spaces, which can be extremely expensive.

[3] Morale and work efficiency are increased because people ride to work in less congestion, in a shorter time, and with parking spaces assured or more easily available.

[4] It makes it easier for non-commuters to get downtown and to other commercial areas.

[5] It serves as a good long-term community relations project.

## America's cities high on carpooling

In **Hartford, Connecticut** a computer program offers any employer, public or private, information that can help him begin a carpool program at his company. And the State Dept. of Transportation constructs carpool commuter parking lots at key highway intersections to make drive-ride programs easier.

In **Knoxville, Tennessee** all forms of ridesharing alleviate mass congestion. In this southern city, carpooling keeps over 22,000 cars off the road. If it were not for carpooling, the city would have to provide more parking space than is currently covered by the entire downtown area.

At the **San Francisco-Oakland Bay Bridge**, priority lanes for carpools with three or more persons speed commuters past long lines of single-occupant cars. And the carpoolers pay no tolls.

In **Omaha, Nebraska** a phone-in service makes it possible for drivers to find a carpool just by making a telephone call.



*In Los Angeles, the city's computer system helps a private, nonprofit organization called Commuter Computer match riders in a five-county area. Since 1974, this ridesharing project has kept 2.5 million pounds of pollutants out of the air in the L.A. area. And that benefits everyone.*

incentives to make ridesharing more attractive. They had monthly drawings for carpool participants. The prize was a color TV. Carpool participation rose more than 17 percent.

They later replaced the TV prize with four \$100 Savings Bonds to spread out the motivational factor. At AiResearch, incentives helped increase ridesharing.

Many companies are doing things to promote carpooling. Sometimes a practical suggestion from an employee is all it takes to get a company program started.

### Q. What about insurance? Accidents do happen.

A. Your insurance policy is the first thing you should check before enter-

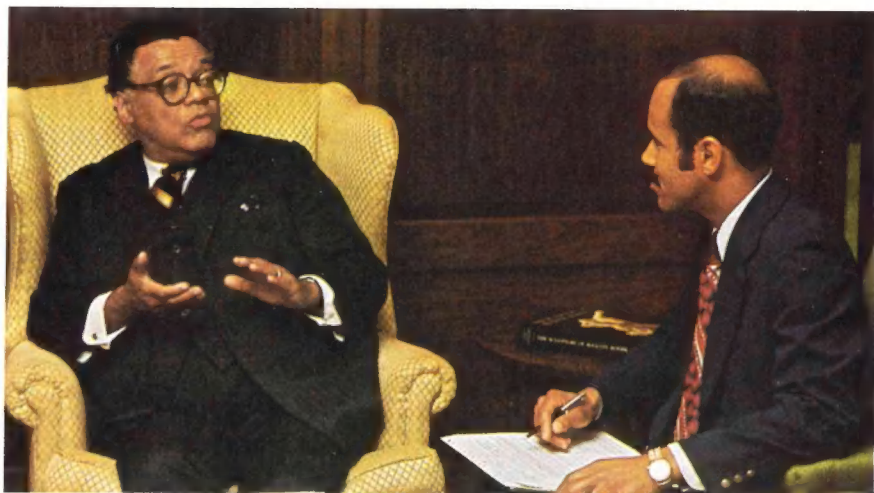


ing into a carpool. Be sure you have liability coverage for all riders all the time. If you have any doubts at all, check with your insurance agent or attorney for clarification of insurance or legal risks.

Incidentally, some insurance companies offer rate reductions for carpoolers.

### Q. The same people every day — doesn't it get boring and irritating?

A. It doesn't have to. But a lot of carpools do break up because of personality problems rather than sched-



*Last fall in Washington, D.C., I discussed the Federal Government's involvement in carpooling and ridesharing with Secretary of Transportation, William T. Coleman, Jr. I learned that they had initiated almost 90 projects in urban areas. In addition to making federal funds available to local government, they had also contacted over 70,000 employers to encourage the development of ridesharing programs.*

uling problems. These rules don't apply to every situation, but as a general guideline they usually work.

1. **Do** set up a schedule and be on time. Always. When you're late you make everyone late. If you can't be on time, let someone know in advance.

2. **Do** all you can to have enough gas in the car for the round trip. Most people resent stops and delays.

3. **Don't** smoke unless everyone smokes, or unless the non-smokers have agreed that it's okay.

4. **Do** vote on the radio. People's tastes in music differ. Some may not

want it on at all. Be democratic.

5. **Don't** join a carpool with people you sense you're not going to enjoy. In this instance, first impressions are a pretty good guide.

6. **Do** consider personal hygiene. "Kissing sweet" you don't have to be. But underdeodorized or overperfumed riders can send people reeling for fresh air.

7. **Do** make an effort to strive for harmony. Rugged individualism and carpooling don't make for particularly happy marriages.

8. **Do** be sure your car is in peak condition. Make sure it's properly serviced regularly. If it conks out on the road, don't expect your passengers to laugh it off.

9. Most important, **do** be careful. No drinks. No speeding. No aggressive driving or negligence. Other people's lives are in your hands.



**Q. What about group buying or leasing a "carpool car"?**

**A.** If you've got a good carpool, look into it. It might eliminate the cost of a second car in some families. Check your attorney about the legal risks of a jointly owned van or car. My co-worker, Warren Young, bought into a carpool van. Write him at the address below for more information.

**Q. Are you trying to tell me there are no disadvantages to carpooling?**

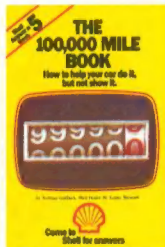
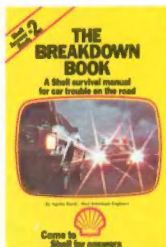
**A.** Certainly not. You know as well as I do that driving your own car, having

it there should you need it, is both convenient and reassuring. But I do feel that for those who can carpool, the advantages far outweigh the disadvantages. Especially when you consider the economic benefit to the carpooler, and the social benefits like *less* crowded highways, *less* air pollution and *more* energy for all of us.

**Q. Any more questions?**

**A.** Write me.

If you have any questions about carpooling that this book doesn't answer, write: Stan Stocks, Shell Oil Company, P.O. Box 61609, Houston, Texas 77208.



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